

**Table 1. 2003 Summary Statistics**

Item	Value	U.S. Rank
<b>Michigan</b>		
NERC Region(s).....		ECAR/MAPP/MAIN
Primary Energy Source .....		Coal
Net Summer Capability (megawatts).....	30,450	9
Electric Utilities .....	23,346	6
Independent Power Producers & Combined Heat and Power .....	7,106	16
Net Generation (megawatthours).....	111,347,060	12
Electric Utilities .....	96,634,055	7
Independent Power Producers & Combined Heat and Power .....	14,713,005	17
Emissions (thousand metric tons)		
Sulfur Dioxide .....	364	12
Nitrogen Oxide.....	130	12
Carbon Dioxide .....	73,278	12
Sulfur Dioxide (lbs/MWh).....	7.2	16
Nitrogen Oxide (lbs/MWh).....	2.6	28
Carbon Dioxide (lbs/MWh).....	1,451	23
Total Retail Sales (megawatthours).....	108,877,193	10
Full Service Provider Sales (megawatthours).....	98,765,181	12
Deregulated Sales (megawatthours).....	10,112,012	8
Direct Use (megawatthours).....	2,919,243	16
Average Retail Price (cents/kWh).....	6.85	23

See footnotes at end of tables.

**Table 2. Ten Largest Plants by Generating Capability, 2003**

Plant	Energy Sources	Operating Company	Net Summer Capability (MW)
<b>Michigan</b>			
1. Monroe.....	Petroleum, Coal	Detroit Edison Co	3,059
2. Donald C Cook .....	Nuclear	Indiana Michigan Power Co	2,093
3. Ludington.....	Hydro	Consumers Energy Co	1,872
4. Midland Cogeneration Venture.....	Petroleum, Gas	Midland Cogeneration Venture	1,817
5. Dan E Karn .....	Gas, Petroleum, Coal	Consumers Energy Co	1,791
6. St Clair.....	Gas, Petroleum, Coal	Detroit Edison Co	1,690
7. Belle River.....	Petroleum, Gas, Coal	Detroit Edison Co	1,499
8. J H Campbell.....	Petroleum, Coal	Consumers Energy Co	1,448
9. Fermi.....	Petroleum, Nuclear	Detroit Edison Co	1,162
10. Covert Generating Project.....	Petroleum, Nuclear	Covert Generating Co LLC	1,058

See footnotes at end of tables.

**Table 3. Top Five Providers of Retail Electricity, 2003**  
(Megawatthours)

Entity	Ownership Type	All Sectors	Residential	Commercial	Industrial	Transportation
<b>Michigan</b>						
1. Detroit Edison Co.....	Investor-Owned	43,671,787	15,074,412	16,343,669	12,253,706	0
2. Consumers Energy Co.....	Investor-Owned	34,238,970	12,462,333	11,375,353	10,401,284	0
3. Quest Energy LLC.....	Power Marketer	3,740,248	0	2,020,644	1,719,604	0
4. Indiana Michigan Power Co .....	Investor-Owned	2,946,225	1,147,469	745,174	1,053,582	0
5. Wisconsin Electric Power Co .....	Investor-Owned	2,935,934	167,357	148,483	2,620,094	0
Total Sales, Top Five Providers.....		87,533,164	28,851,571	30,633,323	28,048,270	0
Percent of Total State Sales .....		80	86	87	70	0

See footnotes at end of tables.

**Table 4. Electric Power Industry Net Summer Capability by Primary Energy Source, 1994, 1998, and 2003**  
(Megawatts)

Energy Source	1994	1998	2003	Annual Growth Rate 1994-2003 (Percent)	Percentage Share		
					1994	1998	2003
Michigan							
Electric Utilities.....	22,414	21,944	23,346	0.5	89.0	89.1	76.7
Coal.....	11,928	11,840	11,636	−.3	47.3	48.1	38.2
Petroleum.....	1,505	2,360	1,598	.7	6.0	9.6	5.2
Natural Gas.....	403	406	2,184	20.7	1.6	1.6	7.2
Other Gases.....	282	0	0	NM	1.1	.0	.0
Dual Fired.....	2,128	1,306	1,867	−1.4	8.4	5.3	6.1
Nuclear.....	3,967	3,918	3,971	*	15.7	15.9	13.0
Hydroelectric.....	329	241	218	−4.5	1.3	1.0	.7
Other Renewables.....	0	1	0	NM	.0	*	.0
Pumped Storage.....	1,872	1,872	1,872	.0	7.4	7.6	6.1
Independent Power Producers and Combined							
Heat and Power.....	2,777	2,675	7,106	11.0	11.0	10.9	23.3
Coal.....	654	358	354	−6.6	2.6	1.5	1.2
Petroleum.....	2	7	46	41.7	*	*	.2
Natural Gas.....	1,659	1,831	6,220	15.8	6.6	7.4	20.4
Dual Fired.....	79	41	89	1.3	.3	.2	.3
Hydroelectric.....	26	26	28	.8	.1	.1	.1
Other Renewables.....	357	412	369	.4	1.4	1.7	1.2
Total Electric Industry.....	25,191	24,616	30,450	2.1	100.0	100.0	100.0
Coal.....	12,583	12,197	11,989	−.5	49.9	49.5	39.4
Petroleum.....	1,507	2,368	1,644	1.0	6.0	9.6	5.4
Natural Gas.....	2,062	2,235	8,404	16.9	8.2	9.1	27.6
Other Gases.....	282	0	0	NM	1.1	.0	.0
Dual Fired.....	2,208	1,347	1,957	−1.3	8.8	5.5	6.4
Nuclear.....	3,967	3,918	3,971	*	15.7	15.9	13.0
Hydroelectric.....	354	267	245	−4.0	1.4	1.1	.8
Other Renewables.....	356	412	368	.4	1.4	1.7	1.2
Pumped Storage.....	1,872	1,872	1,872	.0	7.4	7.6	6.1

See footnotes at end of tables.

**Table 5. Electric Power Industry Generation by Primary Energy Source, 1994, 1998, and 2003**  
(Megawatthours)

Energy Source	1994	1998	2003	Annual Growth Rate 1994-2003 (Percent)	Percentage Share		
					1994	1998	2003
Michigan							
Electric Utilities.....	83,720,636	85,146,307	96,634,055	1.6	85.2	84.7	86.8
Coal.....	67,538,611	69,142,807	66,448,916	-2	68.7	68.8	59.7
Petroleum.....	655,860	1,005,170	883,847	3.4	.7	1.0	.8
Natural Gas.....	656,757	2,152,055	1,098,627	5.9	.7	2.1	1.0
Nuclear .....	14,144,281	12,494,153	27,953,563	7.9	14.4	12.4	25.1
Hydroelectric .....	1,536,190	1,282,471	1,242,987	-2.3	1.6	1.3	1.1
Other Renewables .....	0	0	23,361	NM	.0	.0	*
Pumped Storage .....	-811,063	-930,349	-1,017,246	NM	-8	-9	-9
Independent Power Producers and Combined							
Heat and Power .....	14,586,753	15,331,087	14,713,004	.1	14.8	15.3	13.2
Coal.....	2,233,005	1,329,850	1,328,567	-5.6	2.3	1.3	1.2
Petroleum.....	169,663	166,491	180,046	.7	.2	.2	.2
Natural Gas.....	9,779,792	10,933,125	10,275,917	.6	9.9	10.9	9.2
Other Gases .....	4,634	5,294	2,193	-8.0	*	*	*
Hydroelectric .....	124,078	114,647	142,837	1.6	.1	.1	.1
Other Renewables .....	2,260,274	2,762,052	2,783,445	2.3	2.3	2.7	2.5
Other .....	15,307	19,628	0	NM	*	*	.0
Total Electric Industry.....	98,307,389	100,477,394	111,347,060	1.4	100.0	100.0	100.0
Coal.....	69,771,616	70,472,657	67,777,483	-3	71.0	70.1	60.9
Petroleum.....	825,523	1,171,661	1,063,893	2.9	.8	1.2	1.0
Natural Gas.....	10,436,549	13,085,180	11,374,544	1.0	10.6	13.0	10.2
Other Gases .....	4,634	5,294	2,193	-8.0	*	*	*
Nuclear .....	14,144,281	12,494,153	27,953,563	7.9	14.4	12.4	25.1
Hydroelectric .....	1,660,268	1,397,118	1,385,824	-2.0	1.7	1.4	1.2
Other Renewables .....	2,260,274	2,762,052	2,806,806	2.4	2.3	2.7	2.5
Pumped Storage .....	-811,063	-930,349	-1,017,246	NM	-8	-9	-9
Other .....	15,307	19,628	0	NM	*	*	.0

See footnotes at end of tables.

**Table 6. Electric Power Delivered Fuel Prices for Coal, Petroleum, and Natural Gas, 1994, 1998, and 2003**

Fuel, Quality	1994	1998	2003	Annual Growth Rate 1994-2003 (Percent)
<b>Michigan</b>				
Coal (cents per million Btu).....	150.6	133.4	134.5	-1.2
Average heat value (Btu per pound).....	10,925	10,563	10,123	-8
Average sulfur Content (percent).....	.7	.7	.6	-2.0
Petroleum (cents per million Btu).....	292.7	241.2	W	W
Average heat value (Btu per gallon).....	145,441	130,455	146,846	.1
Average sulfur Content (percent).....	.7	1.6	1.7	9.4
Natural Gas (cents per million Btu).....	240.2	232.4	386.2	5.4
Average heat value (Btu per cubic foot).....	403	542	1,015	10.8

See footnotes at end of tables.

**Table 7. Electric Power Industry Emissions Estimates, 1994, 1998, and 2003**  
(Thousand Metric Tons)

Emission Type	1994	1998	2003	Annual Growth Rate 1994-2003 (Percent)
<b>Michigan</b>				
Sulfur Dioxide				
Coal .....	386	392	335	-1.6
Petroleum .....	15	7	24	5.4
Natural Gas .....	*	*	*	-1.5
Other .....	4	2	5	3.2
Total .....	406	401	364	-1.2
Nitrogen Oxide				
Coal .....	302	200	117	-10.0
Petroleum .....	2	3	3	3.8
Gas .....	12	14	5	-9.9
Other .....	4	6	5	4.2
Total .....	320	222	130	-9.5
Carbon Dioxide				
Coal .....	67,815	70,030	65,246	-.4
Petroleum .....	1,293	1,701	1,478	1.5
Gas .....	6,087	7,733	5,968	-.2
Geothermal .....	—	—	—	NM
Other .....	104	117	586	21.2
Total .....	75,299	79,581	73,278	-.3

See footnotes at end of tables.

**Table 8. Retail Sales, Revenue, and Average Retail Price by Sector, 1994, 1998, and 2003**

Sector	1994	1998	2003	Annual Growth Rate 1994-2003 (Percent)	Percentage Share		
					1994	1998	2003
Michigan							
Retail Sales (thousand megawatthours)							
Residential.....	27,174	29,808	33,669	2.4	29.8	29.7	30.9
Commercial.....	30,412	33,840	35,391	1.7	33.4	33.7	32.5
Industrial .....	32,717	35,983	39,813	2.2	35.9	35.8	36.6
Other .....	857	875	NA	NM	.9	.9	NA
Transportation.....	NA	NA	3	NM	NA	NA	.0
Total .....	91,160	100,506	108,877	2.0	100.0	100.0	100.0
Retail Revenue (million dollars)							
Residential.....	2,249	2,584	2,813	2.5	34.8	36.3	37.7
Commercial.....	2,411	2,642	2,672	1.1	37.3	37.1	35.8
Industrial .....	1,716	1,809	1,976	1.6	26.5	25.4	26.5
Other .....	90	94	NA	NM	1.4	1.3	NA
Total .....	6,467	7,129	7,461	1.6	100.0	100.0	100.0
Average Retail Price (cents/kWh)							
Residential.....	8.28	8.67	8.35	.1	NA	NA	NA
Commercial.....	7.93	7.81	7.55	-.5	NA	NA	NA
Industrial .....	5.25	5.03	4.96	-.6	NA	NA	NA
Other .....	10.54	10.74	NA	NM	NA	NA	NA
Transportation.....	NA	NA	8.21	NM	NA	NA	NA
Total .....	7.09	7.09	6.85	-.4	NA	NA	NA

See footnotes at end of tables.

**Table 9. Retail Electricity Sales Statistics, 2003**

Item	Full Service Providers					Other Providers		Total
	Investor-Owned	Public	Federal	Cooperative	Facility	Energy	Delivery	
Michigan								
Number of Entities.....	9	41	NA	10	5	12	2	79
Number of Retail Customers.....	4,136,049	299,378	NA	277,906	5	628	NA	4,713,966
Retail Sales (thousand megawatthours) .....	85,961	7,881	NA	2,817	2,106	10,112	NA	108,877
Percentage of Retail Sales .....	78.95	7.24	NA	2.59	1.93	9.29	NA	100.00
Revenue from Retail Sales (million dollars) .....	6,035	536	NA	255	129	455	51	7,461
Percentage of Revenue.....	80.89	7.18	NA	3.42	1.73	6.09	.69	100.00
Average Retail Price (cents/kWh).....	7.02	6.79	NA	9.06	6.14	4.50	.51	6.85

Table 9 Notes: Data are shown for All Sectors. **Full Service Providers** sell bundled electricity services (e.g., both energy and delivery) to end users. Full Service Providers may purchase electricity from others (such as Independent Power Producers or other full service providers) prior to delivery. **Other Providers** sell either the energy or the delivery services, but not both. Sales volumes and customer counts shown for Other Providers refer to delivered electricity, which is a joint activity of both energy and delivery providers; for clarity, they are reported only in the Energy column in this table. The revenue shown under Other Providers represents the revenue realized from the sale of the energy and the delivery services distinctly. "Public" entities include municipalities, State power agencies, and municipal marketing authorities. "Federal" entities are either owned or financed by the Federal Government. "Cooperatives" are electric utilities legally established to be owned by and operated for the benefit of those using its service. The cooperative will generate, transmit, and/or distribute supplies of electric energy to a specified area not being serviced by another utility. "Facility" sales represent direct electricity transactions from independent generators to end use consumers.

Other Notes: NA = Not applicable; NM = Not meaningful;

W = Withheld to avoid disclosure of individual company data;

\* = Value is less than half of the smallest unit of measure (e.g., for values with no decimals, the smallest unit is '1' and values under 0.5 are shown as '\*').

Totals may not equal sum of components because of independent rounding;

Table 4 "Other Renewables" includes generation from municipal solid waste; Table 7 "Other" includes emissions from municipal solid waste.

Direct Use is commercial or industrial use of electricity that 1) is self-generated, 2) is produced by either the same entity that consumes the power or an affiliate, and 3) is used in direct support of a service or industrial process located within the same facility or group of facilities that houses the generating equipment. Direct use is exclusive of station use.